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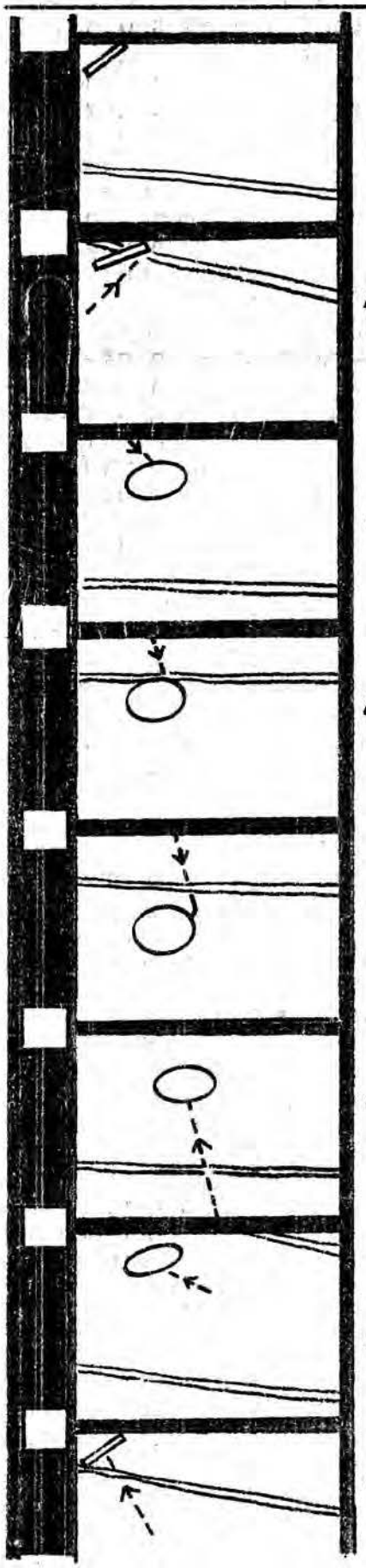
# SAUCERS, SPACE & SCIENCE



## SAULT FILM SHOWS UFO

Special to Saucers, Space & Science
By Norman R. Ouellette - SAWCER OBSERVATION CLUB

About noon, in the last week of June 1960, six jets were flying over Sault Ste. Marie, Ontario. They flew in formation, three on each side of the sky. The sun meanwhile was nearly overhead. Suddenly an object came very swiftly between them across the sky and apparently broke the sound barrier. It was reported on radio station CJIC the same day that the object was an unidentified plane (not shaped as our own.)

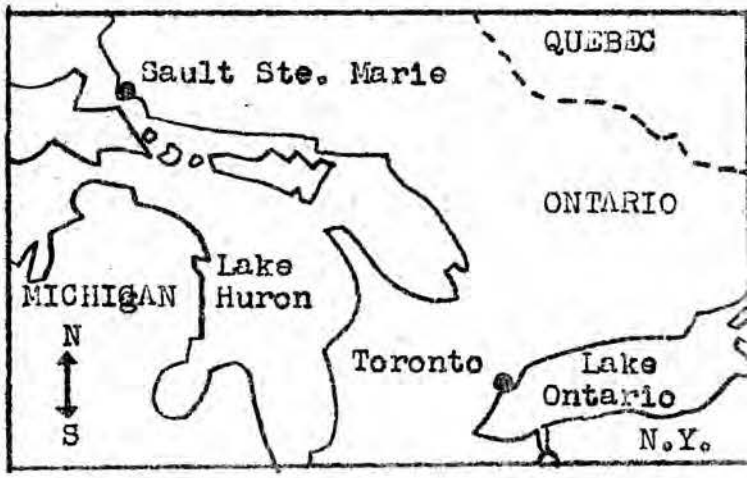
Mrs. Arthur Kunkel, a resident of the Sault was watching the jets from her backyard. She admired the diamond-shape pattern the jets made with their smoke trails, so she took out her 8mm Kodak Brownie movie camera. She started shooting the design left by the jets and managed to include also an unknown flying object although at that time she was unaware of it. The sky was clear blue and a slight wind prevailed.

When the film was developed, she ran it on her projector. Mrs. Kunkel observed for a little over 5 seconds, a large bright yellow disc-shaped craft with the smoke trails as its background.

This film up to this writing has not yet been shown to the Air Force or any other authority. The SAWCER OBSERVATION CLUB of Sault Ste. Marie verified that the strange craft had hidden itself in the sun as the sun's rays shone near the object. According to Mr. Ouellette, director of that club, states: "This film proves enough that flying saucers exist because of the jet trails and the object." If there are any questions, write to the club at 354 Hudson Street, Sault Ste. Marie, Ontario, Canada. Four different snapshots were taken of the film at varied positions and are available at $1.00 per set. Write to Mr. Ouellette at the above address if you would like these photos for your collection.

Arrows show movement of camera

Broken line show recent moves



## THE VANISHING ACT --By Wilbur B. Smith

There have been many well authenticated reports of flying saucers suddenly vanishing, and a few where they have as suddenly appeared. There is little doubt that the phenomenon does take place but we are most perplexed for a satisfactory explanation.

Meade Layne of B.S.R.A. has suggested that the craft materialize from and dematerialize into some other dimension, but since we know so little about this process proffering it as an explanation seems like begging the question. There is a great deal of evidence to support the fact of the materialization phenomenon in a general sense, but our understanding of it is so inadequate that we are not really entitled to comment.

Cramp and Michel have suggested that possibly high speed and rapid accelerations might be an explanation, but again there are difficulties. Even a high speed shell from a big gun can be seen if the observer is favorably situated. Also, high speeds and large accelerations imply large expenditures of energy and even if the energy itself poses no problem, equipment to handle and control it most certainly does. All the information on the structure and equipment of flying saucers points away from any great aggregation of such equipment, and we are left with the conclusion that it is skill, rather than brute force which is involved.

There is an increasing amount of evidence indicating that Time is not quite what we have assumed, and that it is related to a field condition rather parallel with electric and magnetic fields. If we are prepared to accept Time as a variable quantity, and that it can be controlled we can see how this vanishing trick is worked, because it is indeed a trick. When the magician makes an elephant apparently vanish from the stage, he usually does it with mirrors and lighting. The audience continues to look at where the elephant last appeared to be, but sees instead a reflection of the curtains, and therefore think that they are looking through the space recently occupied by the elephant when in reality they are are looking around it.

If a flying saucer is parked in a meadow with a background of trees, and arranges things so that there is less time close to the ship than more remote from it, light will be bent towards the ship, because the wave front will find that the side next to the ship has less time and therefore can't go as far as the side away from the ship. Light being reflected from the trees and passing close to the ship to reach an observer will bend around the ship, much as light is bent in passing through a lens, and an observer who is accustomed to thinking that light always travels in straight lines thinks that the image of the trees has come to him directly through the space occupied by the saucer, whereas in reality it passed around the saucer, and the saucer to all intents and purposes was rendered invisible.

It is true that there will always be a little residue of core made up of light which came directly from the saucer along the same path as the light from the trees, but the effect is precisely the same as if the saucer were viewed through a strong concave or reducing lens, and it would appear to be so small as to be inconspicuous and would not be noticed.

An acute observer might be able to detect the presence of the saucer, either through locating the tiny image, or through noticing the apparent increase in distance from himself to the background in the direction of the saucer, since the light passing near the saucer would have to travel a little farther than the light passing at a greater distance. If the observer were in motion while this latter observation were taking place he would note that an area of background would seem to recede as if it were painted on a backdrop and the backdrop had a wave in it.

Since it is rather apparent that saucers do make use of field manipulation for their support and propulsion, it is not unreasonable to carry this one step further and assume a control over the time field, particularly since this offers such an elegant explanation for what would otherwise be an inexplicable phenomenon.

(From "TOPSIDE", the official organ of The Ottawa Flying Saucer Club.)

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The liaison men that George Adamski has met from Venus feel that the time is right to further aid their earth brothers in attaining interplanetary understanding A pin with symbols and a sheet of explanation is being offered. For further information, write to George Adamski, Star Route, Valley Center, California.

## SHAPED LIKE FOOTBALL -- NOISELESS

Red Bluff, Calif.(UPI) Two California highway patrolmen have reported sighting--and then racing--a mysterious flying football-shaped thing which gave off a mysterious red glow.

At least eight other persons also reported spotting the object, which was described as being the size of an airliner. They reported that sometimes it just hung silently in the air only 200 feet off the ground.

The strange story began about 11.45 pm. Saturday when Patrolmen Stanley Scott and Charles A. Carson were cruising in their patrol car some 18 miles south of here.

Scott last night reported that he first saw the thing about a mile and a half away at an altitude of 200 feet. It seemed to have a row of horizontal lights and "something on the end that made a red beam" and appeared to be sweeping the ground.

As they kept looking at it in disbelief it suddenly shot noiselessly up about 500 feet.

They sent out a radio alert and then put their flashing red light on. The object swung its red beam and then began to slide across the sky.

They pursued the object for about 2 hrs. At one time, it went into "various manoeuvres--straight up and down, and sideways." But it soon left its pursuers behind.

Three deputy sheriffs, hearing the radio alert, raced into the hunt. They said that they saw it too, but were also out-manoeuvred as the thing disappeared over the easternhorizon around 2 am.

At this time, the patrolmen's radio was full of static, presumably caused by the flying object.

Meanwhile, here in Red Bluff, the night jailer, Clarence Fry, picked up the radio alert. About 1 am. he marched four prisoners onto the front steps of the jail house. All five men testified to seeing the glowing mysterious object "about 25 miles to the south."

Neither of the highway patrolmen would identify it as a "flying saucer."

But their boss, Capt. Ruel Blohm, said last night: "They know they saw it and we know they saw it." (The Phoenix Gazette, Arizona. Credit: Lucille P. Bense, Phoenix, Ariz; Gladys Fusaro, Huntington, L.I. New York)

## 'SAUCERS' THERE AGAIN--SEEN BY TWENTY

Red Bluff,(Tehama County) Aug.15, 1960. The return of the Thing, or Things, strange flying objects that provoke questions without answer, was the talk of Tehama county today.

They made a repeat performance last night in the sky over Mineral, on the west side of Lassen National Park. This is 30 miles east of where three highway patrolmen reported similar sightings Saturday night.

Viewing the eerie gyrations of the Things this time was a lip-chewing audience of at least 20 persons, each grateful for the presence of the others to substantiate his story.

These included three Tehama county sheriff's deputies waiting out a roadblock. "I've never seen anything like it and I probably wouldn't say anything about it now if others hadn't seen it too," said Deputy Bill Gonzales.

Gonzales described the Things as flying in a loose formation, glowing a brillian red and white.

"They were dipping and diving and moving at simply unbelievable speed," he said. "And the really strange part --they didn't make a sound."

Gonzales, along with fellow deputy A.D. Perry, had staked out a roadblock for two gunmen who robbed the Chester Bank of America branch yesterday of $16,500. They saw no bandits, only those weird objects flitting about the sky. Perry said he had no theories about the Things, noting cryptically: "This is something over our heads."

Gonzales and Perry said they were too far from the objects to describe any definite shape, although Perry, with some reluctance, said he believed they were "saucer-like".

Another deputy at the Tehama county Sheriff's office said no written reports were filed on the incident, "although it looks like we may have to start a file." (Special to The San Francisco Chronicle. Credit: Mary Austin, New York

## AIR FORCE CHECKING STORY OF "THING"

McChord Air Force Base, Wash. Aug.16/60. Air intelligence investigators were trying to determine today the nature of the flying object seen Saturday night. Ruel Blohm said "As far as I'm concerned," he said, "the case is closed--especially since this object did not violate our highway laws." (San Francisco Chronicle, Credit: Mary Austin, New York.

## THE BELLS CORNERS MYSTERY

By W.B.Smith and J.R.Buchanan

Bells Corners is a small village and rural centre about five miles west of Ottawa. One of these small holdings about a mile and a half south of Bells Corners is held by Mrs. Couturier and her family. The land immediately surrounding the house and up to the highway is cleared but behind the house is bush land running into swamp. Across the swamp and about a mile west is an abandoned farm with the barn still standing and reasonably serviceable, with a couple of meadows nearby which were originally fields.

During the week of August 18, 1958, exact date impossible to determine, at about 10:45 p.m. E.D.T., Mrs. Couturier glanced out of her window and noticed a patch of bluish light from some unexplained source in the yard about 20 ft. south from the house. She immediately put on a black house coat and went out into the yard to investigate. Her son who lives on the ground floor of the same house also came out to investigate Her son who lives on the ground floor of the same house also came out to investigate. Although Mrs. Couturier walked right up to within a couple of feet from the light, her son remained near the corner of the house, urging extreme caution.

Mrs. Couturier said that she saw within the patch of light what appeared to be a small person lying face down on the ground with the face lifted so that she could see the eyes but not the lower part of the face. She described the head as perfectly round and about the size of that of a six year old child, with short cropped rather dark blonde wooly hair on it. The skin appeared to be very white and without blemishes or markings. She was unable to see if there were nose, mouth or ears, but she did note that the eyes were quite large, round and seemed to be facetted and jewel-like. She was unable to determine the source of the light but gained the impression that it came from the eyes.

At this point and after looking at this being for about a minute, Mrs Couturier' s son became so insistent that she left the vicinity and to satisfy him returned to the house and when she looked out the window the light was gone and since there was no moon nothing further could be seen. Although Mrs. Couturier says that she was not frightened, her son apparently was terrified, otherwise a further investigation might have been made at the time. Subsequently she told this story to various friends but was met with frank disbelief.

This story came to our attention on February 16, 1960, following a short TV program on flying saucers over the local station, when Mrs. Couturier phoned the station and told her story. Heavy snows in the area prevented any investigation until May 1st. On this date she was interviewed on tape and the grounds looked over. She pointed out the place where the being was seen, which was marked by an irregular area of dead grass about 3 ft. by 1½ ft. She also pointed out where small unexplained footprints had been seen in the snow last March, the line of which was projected to the vicinity of the old barn mentioned above. The footprints were described as being about what a six year old child might have made but sideways, and fairly close together as if the person had paced along sideways.

It is unfortunate that the footsteps were not reported at the time they were noted, since some investigation might have been made at the time in spite of the heavy snow. However, Mrs. Couturier is strongly of the opinion that the being, whoever or whatever he is, is still in the neighborhood. A superficial search of the three or four square miles of bush and swamp back of the Couturier house failed to yield any tangible evidence of either a space craft or a possible occupant or alien being, but the terrain is such that a small army could hide out with little or no chance of casual detection. Mrs. Couturier has promised to advise immediately of any further developments in the area. (From "TOPSIDE" June, 1960)

(Credit: Mrs. A.M. Hardy for this one and also the next item.)

While travelling on a highway in Ottawa West, a gentleman was amazed to hear his car radio beginning to play music, since it was not turned on and the antenna dis connected. Next, his car stalled and the lights went out. He got out and saw a silvery disc, 8" diameter, about 15 ft in front of his car and at a height of some 15 ft above the ground. It suddenly took off at a 45 degree angle and disappeared within seconds, leaving him rather badly shaken.(TOPSIDE, June/60)

## FLYING SAUCERS OVER SAULT VISITORS FROM OUTER SPACE?

This and other questions are among those being asked of one of the Sault's little known organizations, the "Flying Saucer Club."
This club was started in the city by a group of interested young men in 1959 and is located in the home of director Norman Ouellette in his planetarium and telescope-equipped basement.
In an interview, Mr. Ouellette told THE STAR that "several objects had been sighted over the Sault for which no logical explanation could be given."
Investigating the matter, the club discovered that neither the U.S. Air Force or the meteorological station had any knowledge of these objects nor would they give any opinion as to what they might be.
Aware of the skepticism with which "saucers" are generally treated, Mr. Ouellette said that the club is very careful to make sure that they are on an authentic report and not the victims of hoaxers. (It is reported that the club will soon be putting out a new kind of saucerzine in the near future. Those interested in receiving it, should write to Mr. Ouellette at 354 Hudson Street, Sault Ste. Marie, Ontario, Canada.)

## SKY 'OBJECT' MYSTIFIES SALT LAKERS

An unidentified object, reported as trailing luminous vapor, was reported by callers to The Salt Lake Tribune Monday night.
Callers reported the bright object appeared about 9:50 pm. and was visible for "several minutes."
Observers said the object appeared in the western sky and had a bright vapor trail.
A check with law enforcement agencies, weather bureau and Salt Lake City Municipal Airport showed nothing unusual was seen by any personnel.
Theories, however, were offered that the object was a meteor, high flying aircraft reflecting sunlight or a weather balloon. (The Salt Lake Tribune, Aug.9, 1960. Credit: James D. Wardle, Salt Lake City, Utah.)

New booklet: "DRIVING WHIRLWINDS" on the vortexdrive idea. Price .50¢
Robert Morrison, 41 Roma Rd., London, England.

## 'FLYING OBJECTS' CONCERN SENATORS

Washington, (UPI) Senate investigators have been ordered by Democratic leader Lyndon B. Johnson to keep "close watch" on major developments involving UFOs it was disclosed today.
Johnson, Democratic Vice President nominee, also has ordered the staff of the Senate Preparedness Subcommittee to give him a report on any "significant" sightings of UFOs, along with an analysis of resulting Air Force investigations.
Congressional sources said the check has been underway some time but that nothing sensational has turned up.
Johnson revealed his order in a letter to retired Marine Air Maj. Donald E. Keyhoe, head of a private group called the National Investigations Committee on Aerial Phenomena. The organization has been battling for years to gain official recognition of the existence of such things as flying saucers.
Keyhoe made the letter public along with a statement by his group accusing the Air Force of a "wrong and dangerous" policy in allegedly suppressing information on UFOs.
Keyhoe's committee said it had evaluated carefully hundreds of UFO reports by military and airline pilots, missile trackers and other experts during the last three years.
"It was the majority conclusion", the committee said, "that the UFOs reported by these skilled observers were unknown devices, under intelligent control."
Keyhoe said one of those concurring in this view was Vice Adm. R.H. Hillenkoetter (ret.) former head of the Central Intelligence Agency, plus 200 other military experts, scientists, engineers and analysts.
Keyhoe's committee said there might be danger that unrecognized UFOs could set of an accidental war with Russia. Keyhoe said such a warning already has come from French General L.N. Chassin, NATO coordinator of Allied Air Forces. He said Chassin urged world governments to study the possibility of UFO reality "if only to avoid the danger of global tragedy."
Keyhoe asserted that several false air alerts in the United States already were on record. He said some were caused by defense radar operators mistaking "UFO formations" for possible enemy aircraft. (Cincinnati Enquirer, Aug.6, 1960. Credit: Dorothy Lefler, Cincinnati, Ohio

## ECHO I...AND FRIENDS

Is it the Echo I space satellite, a piece of Echo's launching apparatus, or an unidentified flying object? Whatever it is, scientific and pseudo-scientific observers are perplexed.

For the second night in a row, a white object a bit bigger than a star has appeared in the south-southwest sky over London, Ontario, and arched about 130 degrees in a northeast direction. This was on Wednesday, August 17, 1960. The University of Toronto's Dunlap Observatory said this is not the U.S. Echo I space satellite.

Prof. Gordon R. Magee, head of the department of pure and applied mathematics and astronomy, University of Western Ontario, said he saw the same object both nights.

"It was definitely a man-made object," Prof. Magee said. He also said the object did not appear as bright last night, did not travel as fast, and moved more to the east in its arc.

C.E. Clouthier, an amateur astronomer, said he was watching stars in his backyard when the object came into view in the direction of the planet Jupiter. He said it arched in the sky for six minutes and seemed to veer to the east when it disappeared. Dunlap scientists conceded yesterday that something appeared in orbit but it wasn't Echo I and they didn't know what it was.

There has been no sign at the Dominion Astrophysical Observatory at Victoria, B.C., of a red object reported by Grumman Aviation Engineering Corp. in New York as circling the earth. The company photographed the object with a tracking camera. It appeared about a tenth the size of Echo I and travelling about twice as fast.

Sightings from amateur astronomers and others have been received throughout the United States and Canada.

The last week in August, the object streaked across Long Island skies, baffling space scientists. Observation taken by experts have been fed into electronic computing machines but have yielded no specific results.

Nightly at about 9 o'clock it was seen over Bethpage, L.I., and has been seen as far west as Chicago but not much farther beyond that. Chiefly it has a reddish tinge. But it also has been seen as a pale, silvery white. It was photographed at 8:51 p.m. south of the zenith. Henry Courten, chief of the tracking station said it was first seen on Tuesday, August 23rd. It comes a few minutes before or a few minutes after 9 p.m.

Wednesday and Thursday (28 & 29) it was sighted by the Observatory at Southern Connecticut State College. Robert I. Johnson, director of Chicago's Adler Planetarium sighted it on Friday, and is busy compiling data on the object. He says it doesn't appear to be an artificial satellite or a meteor.

As yet there has been no explanation for the object which travels from east to west rather than in the west to east trajectory common to man-made satellites. Steven Urbano of Lantana Heights, Fla., saw a bright white object hot on the heels of Echo I on August 31. It was about the same size as the Echo I except for a greater brightness and pulsating, finally disappearing after going in the same path, about 10:20 pm. This was only minutes after James Maney, deputy-director of IIOUFO, an Oklahoma saucer club, sighted the object, along with about 25 other persons, pulsating on a westerly course. However, Maney and his friends made 3 sightings within an hour which rules out a satellite at that particular time. None of them would have anything to gain by making a false report.

Toronto satellite watchers caught sight of a point of light moving across the sky at about twice the speed of Echo I on Tuesday night, Sept. 6th. Dunlap Observatory said it was probably one of several satellites now in orbit about the earth. For some reason it was more easily seen last night than normally.

And on Sept. 8th, your editor and his wife while visiting relatives and watching for Echo I in their backyard, saw an object crossing the sky through the big dipper in a west to east direction, in a perfect straight line and disappearing in the haze of Richmond Hill's lights nearby. It was going about 2-3 times as fast as Echo and was a steady white light, remaining in sight for about 10 seconds. This happened five minutes before Echo I made its appearance at 9.25 pm. Watching for the 2nd arrival of Echo I at 11.34 pm., the same night, a bright light appeared next to Arcturus and went in a northern direction and disappeared. At the same time, Mrs. A. Pollock and son David, watched another object in a slightly more westerly direction than Arcturus go in a southwest direction. They all appeared as bright and as high as Echo I.

## UFO SLEUTH TELLS WORLD CHIEFS TO GUARD AGAINST WAR TRIGGERED BY ERROR IN 'SAUCER' SIGHTINGS

Len H. Stringfield, Cincinnati's premier saucer sleuth, waits for world leaders to do something about the problem of unidentified flying objects.
In letters to Pres. Eisenhower, Prime Minister Macmillan of England, President Charles de Gaulle of France and Premier Nikita Khrushchev of Russia, Stringfield cited recent threats by Russian leaders to atomize the world with rockets.
"Ominous in this regard is the possibility that the Russian defense system may mistake a formation of UFOs crossing their territory from a neighboring country and inadvertently retaliate," So far, Stringfield has answers from the United States and Britain.
"CHARGE NOT TRUE", Lt.Col. Lawrence J. Tacker of the office of the secretary of the air force, referring to another part of Stringfield's letter, said, "There is absolutely no truth in the charge that the Air Force or any other governmental agency is withholding information on subject of UFOs from the general public."
Col. Tacker enclosed a report of compilations of UFO sightings this year through June 30. The report said 173 sightings had been reported in the period. Astronomical phenomena accounted for 52, aircraft for 7, balloons for 6, 51 were lumped under an "insufficient data" category, 19 under "other" which means birds, hoaxes, searchlights, etc., and one was the re-entry of the Discoverer VIII satellite. Three were classified "unidentified."
The British Embassy, Washington sent Stringfield a note signed by Lord N. Gordon Lennox, second secretary, which said, "I have been asked to thank you for your letter of June 10 to the Prime Minister. Your action in acquainting him with your views was much appreciated. Stringfield said numerous sightings in the Cincinnati area in June & July had been reported to him. Twenty-one of these were "above average," he said. "I believe the local activity being Heavy probably is indicative of the general concentration of sightings throughout the nation which are not being reported or if they are reported are being suppressed by the Air Force--which is Air Force policy." (Cincinnati Enquirer, Aug.11, 1960. Credit: Dorothy Lefler)

## MYSTERY OBJECTS NOT FROM SPACE

Cambridge, Mass., Sept.7 (AP)--Fiery objects that fell at Hartford, Conn., Sept.4 were of earthly origin and not fragments of a space vehicle or meteor, the Smithsonian Astrophysical Observatory ruled tonight.
Observatory scientists described them as "composed primarily of common compounds and metal." They offered no opinion on the specific source. The report was issued after two days' investigation and analysis of the objects. (Credit: Gladys Fusaro--N.Y. Herald Tribune 9/8/6

## SPACE CAPSULE PART DISCOVERED IN QUEBEC

Authorities said yesterday that a partly oxidized 1,000-pound metal object, found 20 miles west of here, may have been part of a rocket used to put a satellite into orbit. The object was found some weeks ago on the shore of the St. Lawrence River, near the village of Les Ecureuils by a fisherman.
Residents of the village have since communicated with Paul Nadeau, director of the Quebec Observatory, seeking information. Mr. Nadeau said the object probably is the remains of a space capsule but that it has no scientific value. (London Free Press, Sept.27, 1960)

## FLYING OBJECT SEEN OVER TEXAS

San Antonio, Texas, (UPI) An unidentified flying object was sighted last night over this city and the San Fernando Valley, Santa Ana, California.
The first reported sighting was made by moonwatchers at Trinity University here. Bob Jernigan, head of the team, said there were no U.S. satellites due over the area when the object was seen. The team did not believe it was a meteor. It moved from south-southwest to north-northeast at 7:10 pm. CST. This is a course much the same as other Soviet satellites. (New York Journal American Credit: Gladys Fusaro, Huntington, L.I. Also--The Toronto Daily Star, both papers dated Sept. 19, 1960)

## NEW SAUCER BOOK TO BE PUBLISHED

"Flying Saucers & the U.S. Air Force," by Major Lawrence J. Tacker, is planned for October 15th publication by Van Nostrand. It is a refutation of the charge that the A.F. has suppressed information about the UFOs. Major Tacker documents the investigations of the A.F. and presents its conclusions about the saucers. (New York Times, Sept.4, 1960. Credit: Dorothy Lefler, Cincinnati, Ohio.)

## LIFE IN OTHER SOLAR SYSTEMS?

Even before we have learned whether there is life on the planets in our own solar system we have become interested in planets at stellar distances. The attempt being made to receive radio signals possibly being sent by intelligent beings on some of these planets was reported (in SS&S #14--G.D.)

It takes light only five hours to reach the earth from the outermost planet in our solar system, Pluto. But it takes light, travelling at 186,000 miles a second, 4½ years to come to us from the nearest star. Only 55 stars are within 16 light-years of us.

These distances are so great that it is impossible to see with our present telescopes any planets attached even to the nearest stars. However, as Dr. Nancy Roman pointed out at the meetings of the American Astronomical society in Toronto last September, if our present telescopic equipment were on the moon, with no atmosphere, we could readily see planets if there are any, around the nearest stars. Fortunately one does not have to see, or photograph, a planet around a star to be sure it is there. By use of "astronomy of the invisible", planets can be discovered, even though they remain unseen. This comes from the gravitational effect that one body has on another close to it, pulling it off its normal course. It was by astronomy of the invisible that the planet Neptune was predicted, from its pull on the earlier-discovered planet Uranus. And Neptune was found within a degree of its predicted position.

For years laborious, systematic programs have been applied to the nearer stars to detect the sort of motion which might indicate that they have planetary companions. Two stars, 70 Ophiuchi and 61 Cygni, show by their motions that they are accompanied apparently by small non-luminous bodies with masses about three per cent. of the sun's mass. The motions can be interpreted as caused by a single large body or by two smaller bodies with masses between those of Jupiter and Saturn. In addition, some years ago Dr. E. Holmberg of Sweden pointed out regular variations in the positions of some 60 stars which were best explained as caused by attendant planets.

Though astronomers cannot yet claim to be actually observing planets outside our solar system, recent developments in the theory of star formation indicate that planetary systems are probably common around the stars in our galaxy. Fred Hoyle has shown that when a star is formed from the primordial nebula, it is rotating swiftly. Observations show that most of the young stars are still rotating swiftly while the older stars have slowed down. A conclusion is that the rotation of old stars has been slowed by the formation of an equatorial disk from which planets have formed.

Mr. H. Briggs of Cornell computes that 67% of the stars of our galaxy are rotating slowly, which implies that they are accompanied by planets. The present estimate of the number of stars in our galaxy is between one and two hundred thousand million. Dr. Briggs thinks this may mean there are one-hundred thousand million planetary systems in our galaxy. And if our our own solar system with nine planets is a fair norm, then there could be almost one million planets. A large number, even by astronomical standards! Even if you cut these estimates down by a factor of thousand, or even a million, it still leaves a lot of planets. Apparently, our earth existed without life for about four thousand million years after it was formed. We may then assume that a planet must be in existence about this length of time before life-forming processes will produce life on its surface. But the ages of these stars which may father planetary systems are at least as great as this, so their planets should have had time for development of life.

The present conclusion is that beyond our solar system there must be in our galaxy many other planets on which life has arisen and developed.

(By Helen S. Hogg, 'WITH THE STARS' Toronto Daily Star, Jan. 23, 1960)

## RUSSIANS FIND NEW PLANET

Moscow (AP) Russian astronomers have discovered a new planet, Kazakhstan Pravda reports. It says the planet, detected by accident when scientists photographed the stars in the constellation Capricorn "is beyond Pluto and is very small."

(Victoria Daily Times, Feb. 10, 1960)

'LOOK UP TO MARS' a new booklet by The Athenaeum of Cincinnati, discusses the moons, canals, communication, etc. Write for your copy to The Athenaeum, Box #1, Campus Station, Cincinnati 21, Ohio. Price: $1.00.